

Attorney File Ref. 08291/482001

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application

Robert Zhong Lu *et al.*

Group: 1774

Serial No. 09/265,788, filed March 10, 1999

Examiner: D. Garrett

For: **AQUEOUS CLEANING AND DISINFECTING COMPOSITIONS BASED ON
QUATERNARY AMMONIUM COMPOUNDS INCLUDING ALKYL POLYGLYCOSIDE
SURFACTANTS HAVING REDUCED IRRITATION CHARACTERISTICS**

DECLARATION OF ROBERT ZHONG LU UNDER 37 C.F.R. § 1.132

Montvale, New Jersey 07645
05/15/00

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

I, Robert Zhong Lu, declare that:

I am one of the named inventors in the application captioned above;

I received a Bachelor of Science Degree in Chemical Engineering from Tsing-hwa University, Beijing, China in 1982;

I received a Master of Science Degree in Chemical Engineering from Clarkson University, Potsdam, New York in 1986;

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I received a Doctor of Philosophy Degree in Chemical Engineering from University of Rochester at Rochester, New York in 1991;

I have been employed at Reckitt Benckiser Inc. since 1993 where I presently hold the position of Technical Manager; and

I am a named inventor on five United States Patents.

Purpose

The purpose of this declaration is to demonstrate that formulations of the present invention which contain alkylpolyglycosides have good toxicity (eye) and that formulations that do not contain alkylpolyglycosides do not have good toxicity (eye). The following experiments were conducted under my direction and control.

Methodology

Various formulations were prepared, the compositions of which are shown in TABLE 1. Formulations identified as "Ex. 1" and "Comp. 1" are those formulations, described in the above application, which demonstrate an inventive composition which is the subject of the above application and a control composition, respectively. Formulations identified as "A", "B", and "C" also demonstrate inventive compositions which are the subject of the above application. Formulations identified as "D", "E", and "F" demonstrate non-inventive formulations. The percent actives, other than 100%, are shown in parentheses. The formulations were made in accordance with the procedures set forth in the above application at page 23, lines 1 to 17. A description of the ingredients of TABLE 1 are set forth in TABLE 2.

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TABLE 1	Ex. 1	A	B	C	Comp. 1	D	E	F
Ingredient	%	%	%	%	%	%	%	%
EDTA	0.25	0.25	0.25	0.23	0.25	0.25	0.25	0.25
Neodol 25-7 (100%)	--	--	--	--	5.00	--	--	--
Genapol 26-L-60 (100%)	--	3.00	--	2.70	--	--	--	--
Polytergent SL-62 (100%)	4.00	--	3.00	--	--	5.00	4.00	4.00
Pluronic L64 (100%)	--	2.00	3.00	1.80	2.00	2.00	4.00	4.00
Glucopon 325N (50%)	4.00	4.00	4.00	3.60	--	--	--	--
BTC 8358 (80%)	1.625	1.63	1.63	1.47	1.625	1.625	1.440	0.500
BTC 818 (50%)	--	--	--	--	--	--	--	1.400
Na Borate	--	0.10	--	0.09	--	--	--	--
Na Bicarbonate	--	--	0.20	--	--	--	--	--
Fragrance	0.20	0.20	0.20	0.19	0.20	0.20	0.20	0.20
Dye	0.20	0.20	0.20	0.19	0.20	0.20	0.20	0.20
Water	q.s.	q.s.	q.s.	q.s.	q.s.	q.s.	q.s.	q.s.

TABLE 2	
Ingredient	Description
EDTA	Tetrasodium ethylenediaminetetraacetate
Neodol 25-7 (100%)	Nonionic C ₁₂₋₁₅ alkanol condensed with 7 moles ethylene oxide (Shell)
Genapol 26-L-60 (100%)	Linear C ₁₂₋₁₅ alcohol ethoxylate condensed with ethylene oxide (cloud point 60 C (1 wt% in water)) (Clariant)
Polytergent SL-62 (100%)	Alkoxylated alcohol (BASF)
Pluronic L64 (100%)	Nonionic ethoxy/propoxy block copolymer surfactant (BASF)
Glucopon 325N (50%)	Technical grade mixture of C ₈₋₁₁ alkylpolyglycosides (Henkel)
BTC 8358 (80%)	Alkyl dimethyl benzyl ammonium chloride (Stepan)
BTC 818 (50%)	Mixture of octyl decyl dimethyl ammonium chloride, didecyl dimethyl ammonium chloride, and dioctyl dimethyl ammonium chloride (Stepan)
Na Borate	Sodium borate
Na Bicarbonate	Sodium bicarbonate
Fragrance	Proprietary composition
Dye	Proprietary composition
Water	Deionized water

Results

The formulations of TABLE 1 were evaluated using the Draize Eye test protocol as set forth in the above application at page 26, lines 3 to 17. The results of Draize Eye test on the formulations of TABLE 1 are found in TABLE 3.

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TABLE 3	Ex. 1	A	B	C	Comp. 1	D	E	F
Corneal opacity in test subjects/days tested	0/21	0/14	0/14	0/7	8.33/21	8.3/21	3.33/21	3.33/21

Conclusions

Inventive formulations Ex. 1, A, B, and C had no corneal opacity over the number of days tested. Non-inventive formulations Comp. 1, D, E, and F exhibited corneal opacity over the number of days tested.

It is unexpected that formulations containing alkylpolyglycosides (Ex. 1, A, B, and C) would have no corneal opacity as compared to formulations that do not contain alkylpolyglycosides (Comp. 1, D, E, and F).

I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.


Robert Zhong Lu

Dated: 5/15/00